IN THE CLAIMS

Please amend the claims as follows.

1. (Cancelled)

2. (Currently Amended) The method of claim 4 [[1]] further comprising:

measuring a received power level of orthogonal frequency-division multiplexed signals at a communication station; and

estimating the path loss from an access point transmit power level and the measured received power level.

3. (Original) The method of claim 2 further comprising requesting the access point transmit power level from the access point prior to estimating the path loss, the access point transmit power level having been used by the access point to transmit the orthogonal frequency-division multiplexed signals.

4. (Previously Presented) A method comprising adjusting a communication station transmit power level for orthogonal frequency-division multiplexed signal transmissions to an access point based on an access point sensitivity, a path loss, and a link margin variation,

wherein the access point sensitivity is calculated by subtracting the path loss and an access point link margin from the communication station transmit power level.

5. (Original) The method of claim 4 further comprising requesting the access point link margin from the access point prior to calculating the access point sensitivity.

6. (Previously Presented) The method of claim 5 wherein the access point calculates the access point link margin from either a ratio of a received signal-to-noise ratio and a desired signal-to-noise ratio, or an access point received power level and the access point sensitivity.

7. (Currently Amended) The method of claim 4 [[1]] further comprising estimating the link margin variation from at least one of an access point transmit power variation, a path loss variation, and a receiver power measurement error of the communication station.

8. (Original) The method of claim 7 wherein the path loss variation is based on whether the access point is indoors or outdoors,

wherein the access point transmit power variation is based on characteristics of the access point, and

wherein the receiver power measurement error is based on characteristics of a communication station.

9. (Currently Amended) The method of claim 4 [[1]] further comprising reporting a communication station link margin and the communication station transmit power level to the access point,

wherein the access point is to determine whether to adjust an access point transmit power level based on the communication station link margin and transmit power level.

10. (Previously Presented) A method comprising:

adjusting a communication station transmit power level for orthogonal frequency-division multiplexed signal transmissions to an access point based on an access point sensitivity, a path loss, and a link margin variation;

reporting a communication station link margin and the communication station transmit power level to the access point,

wherein the access point is to determine whether to adjust an access point transmit power level based on the communication station link margin and transmit power level,

wherein the method further comprises prior to the reporting:

determining a data rate of an orthogonal frequency-division multiplexed symbol received by a communication station;

determining a communication station sensitivity based on the data rate, the communication station sensitivity being either predetermined or precalibrated for various data rates; and

calculating the communication station link margin from the data rate and the communication station sensitivity,

wherein the determining the communication station sensitivity comprises looking up the communication station sensitivity in a table based on the data rate.

11. (Original) The method of claim 2 wherein the method is performed by the communication station operating as part of a wireless local area network communicating orthogonal division multiplexed signals with the access point,

wherein the orthogonal frequency-division multiplexed signals are within a subchannel comprising a plurality of orthogonal frequency-division multiplexed subcarriers, and

wherein each subcarrier of the subchannel has a null at substantially a center frequency of other subcarriers of the subchannel.

12. (Original) The method of claim 11 wherein the measuring comprises measuring an average received power level across the subcarriers of the subchannel,

wherein the communication station transmit power level is initially set at a predetermined maximum level, and

wherein adjusting comprises reducing the communication station transmit power level.

13. (Original) The method of claim 12 wherein the orthogonal frequency-division multiplexed signals are within a wideband channel comprising two or more frequency-separated subchannels,

wherein each of the subchannels has an associated plurality of orthogonal subcarriers,

wherein each subcarrier of an associated subchannel has a null at substantially a center frequency of other subcarriers of the associated subchannel,

wherein the adjusting comprises adjusting a communication station transmit power level for each of the two or more subchannels, and

wherein the measuring comprises measuring an average received power level of the plurality of subcarriers associated with each of the subchannels.

14. (Original) The method of claim 3 further comprising performing an open-loop transmit power control procedure when the access point transmit power level is not received from the access point,

wherein the open-loop transmit power control procedure includes:

retrieving a communication station receiver sensitivity based on a data rate of an orthogonal frequency-division multiplexed symbol from a table; and

reducing the communication station transmit power level by a first amount when the received power level exceeds the communication station receiver sensitivity by a second amount.

15. (Previously Presented) A method comprising adjusting a communication station transmit power level for orthogonal frequency-division multiplexed signal transmissions to an access point based on an access point sensitivity, a path loss, and a link margin variation,

wherein the method comprises:

measuring an average power level across orthogonal frequency-division multiplexed subcarriers of a subchannel received by a communication station;

estimating the path loss from an access point transmit power level and the measured average power level;

calculating the access point sensitivity by subtracting the path loss and an access point link margin from the communication station transmit power level;

estimating the link margin variation from at least one of an access point transmit power variation, an indoor path loss variation, and a receiver power measurement error of the communication station; and

requesting the access point transmit power level and the link margin from the access point prior to calculating the access point sensitivity,

wherein the adjusting comprises setting the communication station transmit power level by an amount substantially comprising the sum of the access point sensitivity, the path loss and the link margin variation.

16. (Cancelled)

17. (Cancelled)

18. (Cancelled)

19. (Currently Amended) The communication station of claim 22 [[16]] wherein the controller is to estimate the link margin variation from at least one of an access point transmit power variation, a path loss variation, and a receiver power measurement error of the communication station.

20. (Original) The communication station of claim 19 wherein the controller is to determine the path loss variation based on whether the access point is indoors or outdoors,

wherein the access point transmit power variation is based on characteristics of the access point, and

wherein the receiver power measurement error is based on characteristics of the communication station.

21. (Cancelled)

22. (Currently Amended) A communication station comprising:

a transmitter to transmit orthogonal frequency-division multiplexed signals to an access point;

a controller to adjust a communication station transmit power level of the transmitter based on an access point sensitivity, a path loss, and a link margin variation; and

a receiver to receive orthogonal frequency division multiplex communication signals,

wherein the controller is to measure a received power level of the orthogonal frequency-division multiplexed signals and estimate the path loss from an access point transmit power level and the measured received power level,

wherein the controller is to configure the transmitter to report a communication station link margin and the communication station transmit power level to the access point,

wherein the access point is to responsively determine whether to adjust the access point transmit power level based on the reported communication station link margin and communication station transmit power level,

~~The communication station of claim 21~~ wherein prior to configuring the transmitter to report, the controller is to:

determine a data rate of an orthogonal frequency-division multiplexed symbol received by the receiver;

determine a communication station sensitivity based on the data rate, the communication station sensitivity being either predetermined or precalibrated for various data rates; and

calculate the communication station link margin from the data rate and the communication station sensitivity.

23. (Currently Amended) A communication station comprising:

a transmitter to transmit orthogonal frequency-division multiplexed signals to an access point;

a controller to adjust a communication station transmit power level of the transmitter based on an access point sensitivity, a path loss, and a link margin variation; and

a receiver to receive orthogonal frequency division multiplex communication signals, and

wherein the controller is to measure a received power level of the orthogonal frequency-division multiplexed signals and estimate the path loss from an access point transmit power level and the measured received power level,

wherein the controller is to configure the transmitter to send a request message to the access point to request the access point transmit power level and an access point link margin prior to estimating the path loss,

wherein the controller is to calculate the access point sensitivity by subtracting the path loss and the access point link margin from the communication station transmit power level,

~~The communication station of claim 18~~ wherein the controller comprises a digital signal processor, and wherein the controller is to perform an open-loop transmit power control procedure when the access point transmit power level is not received from the access point,

wherein as part of the open-loop transmit power control process, the controller is to:

retrieve a communication station receiver sensitivity based on a data rate of an orthogonal frequency-division multiplexed symbol from a table; and

reduce the communication station transmit power level by a first amount when the received power level exceeds the communication station receiver sensitivity by a second amount.

24. (Previously Presented) A system comprising:

a substantially omnidirectional antenna;

a transmitter to transmit orthogonal frequency-division multiplexed signals to an access point via the antenna; and

a controller to adjust a communication station transmit power level of the transmitter based on an access point sensitivity, a path loss, and a link margin variation,

wherein the access point sensitivity is calculated by the controller by subtracting the path loss and an access point link margin from the communication station transmit power level.

25. (Previously Presented) The system of claim 24 further comprising a receiver to receive orthogonal frequency division multiplex communication signals,

wherein the controller is to measure a received power level of the orthogonal frequency-division multiplexed signals and estimate the path loss from an access point transmit power level and the measured received power level,

wherein the controller is to configure the transmitter to send a request message to the access point to request the access point transmit power level and an access point link margin prior to estimating the path loss.

26. (Original) The system of claim 24 wherein the controller is to estimate the link margin variation from at least one of an access point transmit power variation, a path loss variation, and a receiver power measurement error of the receiver,

wherein the controller is to determine the path loss variation based on whether the access point is indoors or outdoors,

wherein the access point transmit power variation is based on characteristics of the access point, and

wherein the receiver power measurement error is based on characteristics of the receiver.

27. (Previously Presented) A system comprising:

a substantially omnidirectional antenna;

a transmitter to transmit orthogonal frequency-division multiplexed signals to an access point via the antenna; and

a controller to adjust a communication station transmit power level of the transmitter based on an access point sensitivity, a path loss, and a link margin variation,

wherein the system comprises a communication station that is to operate as part of a wireless local area network communicating orthogonal division multiplexed signals with the access point, and

wherein the orthogonal frequency-division multiplexed signals are within a subchannel comprising a plurality of orthogonal frequency-division multiplexed subcarriers, and

wherein each subcarrier of the subchannel has a null at substantially a center frequency of other subcarriers of the subchannel,

wherein the controller comprises a digital signal processor,

wherein the controller is to perform an open-loop transmit power control procedure when the access point transmit power level is not received from the access point, and

wherein as part of the open-loop transmit power control procedure, the controller is to:

retrieve a communication station receiver sensitivity based on a data rate of an orthogonal frequency-division multiplexed symbol from a table; and

reduce the communication station transmit power level by a first amount when the received power level exceeds the communication station receiver sensitivity by a second amount.

28. (Previously Presented) A computer readable medium that stores instructions for execution by one or more processors, causing said processors to perform operations comprising

adjusting a communication station transmit power level for orthogonal frequency-division multiplexed signal transmissions to an access point based on an access point sensitivity, a path loss, and a link margin variation,

wherein the operations further comprise:

measuring a received power level of orthogonal frequency-division multiplexed signals at a communication station;

estimating the path loss from an access point transmit power level and the measured received power level; and

calculating the access point sensitivity by subtracting the path loss and an access point link margin from the communication station transmit power level.

29. (Canceled)

30. (Previously Presented) The computer-readable medium of claim 28 wherein the instructions, when further executed by one or more of said processors cause said processors to perform operations further comprising:

estimating the link margin variation from at least one of an access point transmit power variation, a path loss variation, and a receiver power measurement error of the communication station;

requesting the access point transmit power level from the access point prior to estimating the path loss, the access point transmit power level having been used by the access point to transmit the orthogonal frequency-division multiplexed signals; and

requesting the access point link margin from the access point prior to calculating the access point sensitivity.